

Amendments to the Sequence Listing

Shown below are amendments made to the sequence listing. An amended sequence listing is attached to this preliminary amendment.

SEQ ID NO:189

gaagatgacatcataattgcaacaaagaatggaaaagtcagagggatgaacttgacagttt
tggggcacggtAACAGCCTTCTTGGATTCCCTATGCACAGCCACCTCTGGTAGACTTC
GATTCAAAAAGCCACAGTCTCTGACCAAGTGGTCTGATATTGGAATGCCACAAAATATGCA
AATTCTTGCTGTCAGAACATAGATCAAAGTTTCCAGGCTTCCATGGATCAGAGATGTGGAA
CCCAACACTGACCTCAGTGAAGACTGTTATATCTAAATGTATGGATTCCAGCACCTAAAC
CAAAAAATGCCACTGTATTGATATGGATTATGGTGGTTTCAAACCTGGAACATCATCT
TTACATTTATGATGGCAAGTTCTGGCTCGGGTTGAAAGAGTTATTGAGTGTCAATGAA
CTATAGGGTGGGTGCCCTAGGATTCTTAGCTTGCCAGGAAATCCTGAGGCTCCAGGAAACA
TGGGTTATTGATCAAACAGTTGGCTCTCAGTGGTTCAAACAAAATATAGCAGCCTTGGT
GGAAATCCTAAAGTGTAACTCTCTTGGAGAAAGTGCAGGAGCAGCTCAGTTAGCCTGCA
TTTGCTTCTCCTGGAAGCCATTCTTGGTCACTGGAGGAAATCTGCAAAGTGGTTCTTAA
ATGCTCCTTGGCGGTAACATCTCTTATGAAGCTAGGAACAGAACGTTGAACTTAGCTAA
TTGACTGGTTGCTCTAGAGAGAATGAGACTGAAATAATCAAGTGTCTTAGAAATAAGATCC
CCAAGAAATTCTCTGAATGAAGTCTTGTCCCCTATGGACTeeegctttgtcagtaa
ACTTGGTCCGACCGTG

(853-855)

gatgggtatttctcactgacatgccagacatattactgaacttgacaattaaaaaac
ccagattttgggggtgttaataaaagatgaaggacagcttttagtctatggctcctg
gcttcagcaaagataacaatagtatcataactagaaaaagaatttcaggaaggttaaaaata
tttttccaggagtgagttggaaaggaatccatcctttcattacacagactgggt
agatgatcagagacactaccgtgaggcctgggtgatgtgttggttattataata
ttatatgccctgccttgagttaccaagaagttctcagaatgggaaataatgcctttc
tactatttgaacaccgatcctccaaacttccgtggccagaatggatggagtgtatgcattgg
ctatgaaattgaatttgtcttggttacctctggaaagaagagataattacacaaaagccg
aggaaatttgagtagatccatagtgaaacggtggcaattttgcaaaatatggaatcca
aatgagactcagaacaatagcacaagctggcctgtcttcaaaagcactgaacaaaaatatct
aacctgaatacagagtcaacaagaataatgacgaaactacgtgctcaacaatgtcgattct
ggacatcattttccaaaagtcttgaaatgacagggaaattgtatgaagcagaatggag
tgaaaaggcaggattccatcgctggaaacaattacatgatggactggaaaaatcaatttaacga
ttacactagcaagaaagaaagtgtgtgggtctc

SEQ ID NO:190

Glu Asp Asp Ile Ile Ala Thr Lys Asn Gly Lys Val Arg Gly
Met Asn Leu Thr Val Phe Gly Gly Thr Val Thr Ala Phe Leu Gly
Ile Pro Tyr Ala Gln Pro Pro Leu Gly Arg Leu Arg Phe Lys Lys
Pro Gln Ser Leu Thr Lys Trp Ser Asp Ile Trp Asn Ala Thr Lys
Tyr Ala Asn Ser Cys Cys Gln Asn Ile Asp Gln Ser Phe Pro Gly
Phe His Gly Ser Glu Met Trp Asn Pro Asn Thr Asp Leu Ser Glu
Asp Cys Leu Tyr Leu Asn Val Trp Ile Pro Ala Pro Lys Pro Lys
Asn Ala Thr Val Leu Ile Trp Ile Tyr Gly Gly Phe Gln Thr
Gly Thr Ser Ser Leu His Val Tyr Asp Gly Lys Phe Leu Ala Arg
Val Glu Arg Val Ile Val Val Ser Met Asn Tyr Arg Val Gly Ala
Leu Gly Phe Leu Ala Leu Pro Gly Asn Pro Glu Ala Pro Gly Asn
Met Gly Leu Phe Asp Gln Gln Leu Ala Leu Gln Trp Val Gln Lys

Asn Ile Ala Ala Phe Gly Gly Asn Pro Lys Ser Val Thr Leu Phe
Gly Glu Ser Ala Gly Ala Ala Ser Val Ser Leu His Leu Leu Ser
Pro Gly Ser His Ser Leu Phe Thr Arg Ala Ile Leu Gln Ser Gly
Ser Phe Asn Ala Pro Trp Ala Val Thr Ser Leu Tyr Glu Ala Arg
Asn Arg Thr Leu Asn Leu Ala Lys Leu Thr Gly Cys Ser Arg Glu
Asn Glu Thr Glu Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln
Glu Ile Leu Asn Glu Val Phe Val Val Pro Tyr Gly Thr Pre

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Leu Leu Ser Val Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu
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Thr Asp Met Pro Asp Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys
Thr Gln Ile Leu Val Gly Val Asn Lys Asp Glu Gly Thr Ala Phe
Leu Val Tyr Gly Ala Pro Gly Phe Ser Lys Asp Asn Asn Ser Ile
Ile Thr Arg Lys Glu Phe Gln Glu Gly Leu Lys Ile Phe Phe Pro
Gly Val Ser Glu Phe Gly Lys Glu Ser Ile Leu Phe His Tyr Thr
Asp Trp Val Asp Asp Gln Arg Pro Glu Asn Tyr Arg Glu Ala Leu
Gly Asp Val Val Gly Asp Tyr Asn Ile Ile Cys Pro Ala Leu Glu
Phe Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala Phe Phe Tyr
Tyr Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu Trp Met
Gly Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu Pro
Leu Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser
Arg Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn
Pro Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys
Ser Thr Glu Gln Lys Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg
Ile Met Thr Lys Leu Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser
Phe Phe Pro Lys Val Leu Glu Met Thr Gly Asn Ile Asp Glu Ala
Glu Trp Glu Trp Lys Ala Gly Phe His Arg Trp Asn Asn Tyr Met
Met Asp Trp Lys Asn Gln Phe Asn Asp Tyr Thr Ser Lys Lys Glu
Ser Cys Val Gly Leu

SEQ ID NO:199

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SEQ ID NO:200

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SEQ ID NO:201 SEQ ID NO:199

gaggtgcagctgggtcagtcggagcagaggtaaaaaagccggggagtcgtctgtcaagatctc
ctgttaagggttctggccgtacattaccaggtaaatatgcactgggtgcgcagatgcccgg
ggaaaggcctggagtggatggggctatttatcccttgcacgggtgataacttcctacaatcag
aagtcgaaactccaggtaaccatctcagccgacaagtccatcagcaccgcctacactgcagtg
gagcagcctgaaggcctcgacaccgcgttattactgtgcgagatcgacttacgtggcg
gtgactggcagttcgatgtctggggcaaggggaccacggtcaccgtctcctcagcctccacc
aaggggccatcggtttccccctggcacccctccaaagagcacctctggggcacagcgcc
cctggcgtcgtcaaggactacttccccgaaccgggtacgggtgtcgtaactcaggcg
ccctgaccagcggcgtgcacacctccggctgtcctacagtccaggactctactccctc
agcagcgtggtgcaccgtgcctccaggcttggcaccacatctgcaacgtgaa
tcacaagcccagcaacaccaaggtggacaagaaagcagagccaaatcttgtgacaaaactc
acacatgccaccgtgcccggatgtttttggcacggtaacagccttcttggaaattcccta
gtcagagggatgaacttgcacagttttttggcacggtaacagccttcttggaaattcccta
tgcacagccaccctttggtagacttcgattcaaaaagccacagtctgaccaagtggctg

atatttggaatgccacaaaatgcaaattctgctgtcagaacatagatcaaagtttcca
ggcttcttggatcagagatgtggAACCCAAACACTGACCTCAGTGAAGACTGTTATATCT
AAATGTATGGATTCCAGCACCTAACCAACCAAAATGCCACTGTATTGATATGGATTATGGTG
GTGGTTTCAAACCTGGAACATCATCTTACATGTTATGATGGCAAGTTCTGGCTCGGGTT
GAAAGAGTTATTGTTAGTGTCAATGAACATAGGGTGGGTGCCCTAGGATTCTTAGCTTGCC
AGGAAATCCTGAGGCTCCAGGGAACATGGGTTATTGATCAACAGTTGGCTTCAGTGGG
TTCAAAAAATATAGCAGCCTTGGTGGAAATCCTAAAGTGTAACTCTCTTGGAGAAAGT
GCAGGAGCAGCTCAGTTAGCCTGCATTGCTTCCTGGAGCCATTGTTCAACCAG
AGCCATTCTGCAAAGTGGTCCGCTAATGCTCCTGGCGGTAAACATCTCTTATGAAGCTA
GGAACAGAACGTTGAACCTAGCTAAATTGACTGGTGTCTAGAGAGAATGAGACTGAAATA
ATCAAGTGTCTAGAAATAAGATCCCCAAGAAATTCTGAATGAAGCATTGTTGTCCC
CTATGGGACTAATTGTCAGTAAACTTGGTCCGACCGTGGATGGTGTATTCTCACTGACA
TGCCAGACATATTACTGAACATTGGACAATTAAAAACCCAGATTGGTGGGTGTTAAT
AAAGATGAAGGGACAGCTTTAGCGTATGGTGTCTGGCTCAGCAAAGATAACAATAG
TATCATAACTAGAAAAGAATTTCAGGAAGGTTAAAAATATTTCCAGGAGTGAAGTGAAGT
TTGGAAAGGAATCCATCCTTTCTTACACAGACTGGTAGATGATCAGAGACCTGAAAAC
TACCGTGGGCCTTGGGTGATGTTGGGATTATAATTCTATGCCCTGCCTGGAGTT
CACCAAGAAGTCTCAGAATGGGAAATAATGCCCTTTCTACTATTGAAACACCGATCCT
CCAAACTTCCGTGGCCAGAATGGATGGAGTGTGATGGCTATGAAATTGAAATTGTCTTT
GGTTACCTCTGGAAAGAAGAGATAATTACACAAAAGCCGAGGAATTGGTAGATCCAT
AGTGAACCGTGGGCAAATTGCAAATATGGAAATCCAATGAGACTCAGAACATAAGCA
CAAGCTGGCCTGTCTTCAAAAGCACTGAACAAAATATCTAACCTGAATACAGAGTCAACA
AGAATAATGACGAAACTACGTGCTCAACAAATGTCGATTCTGGACATCATTTCAAAAGT
CTGA

SEQ ID NO:202 SEQ ID NO:200

Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly
Glu Ser Leu Lys Ile Ser Cys Lys Gly Ser Gly Arg Thr Phe Thr
Ser Tyr Asn Met His Trp Val Arg Gln Met Pro Gly Lys Gly Leu
Glu Trp Met Gly Ala Ile Tyr Pro Leu Thr Gly Asp Thr Ser Tyr
Asn Gln Lys Ser Lys Leu Gln Val Thr Ile Ser Ala Asp Lys Ser
Ile Ser Thr Ala Tyr Leu Gln Trp Ser Ser Leu Lys Ala Ser Asp
Thr Ala Met Tyr Tyr Cys Ala Arg Ser Thr Tyr Val Gly Gly Asp
Trp Gln Phe Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser
Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser
Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser
Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser
Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro
Ser Asn Thr Lys Val Asp Lys Lys Ala Glu Pro Lys Ser Cys Asp
Lys Thr His Thr Cys Pro Pro Cys Pro Lys Leu Glu Asp Asp Ile
Ile Ile Ala Thr Lys Asn Gly Lys Val Arg Gly Met Asn Leu Thr
Val Phe Gly Gly Thr Val Thr Ala Phe Leu Gly Ile Pro Tyr Ala
Gln Pro Pro Leu Gly Arg Leu Arg Phe Lys Lys Pro Gln Ser Leu
Thr Lys Trp Ser Asp Ile Trp Asn Ala Thr Lys Tyr Ala Asn Ser
Cys Cys Gln Asn Ile Asp Gln Ser Phe Pro Gly Phe Phe Gly Ser
Glu Met Trp Asn Pro Asn Thr Asp Leu Ser Glu Asp Cys Leu Tyr
Leu Asn Val Trp Ile Pro Ala Pro Lys Pro Lys Asn Ala Thr Val

Leu Ile Trp Ile Tyr Gly Gly Gly Phe Gln Thr Gly Thr Ser Ser
Leu His Val Tyr Asp Gly Lys Phe Leu Ala Arg Val Glu Arg Val
Ile Val Val Ser Met Asn Tyr Arg Val Gly Ala Leu Gly Phe Leu
Ala Leu Pro Gly Asn Pro Glu Ala Pro Gly Asn Met Gly Leu Phe
Asp Gln Gln Leu Ala Leu Gln Trp Val Gln Lys Asn Ile Ala Ala
Phe Gly Gly Asn Pro Lys Ser Val Thr Leu Phe Gly Glu Ser Ala
Gly Ala Ala Ser Val Ser Leu His Leu Leu Ser Pro Gly Ser His
Ser Leu Phe Thr Arg Ala Ile Leu Gln Ser Gly Ser Ala Asn Ala
Pro Trp Ala Val Thr Ser Leu Tyr Glu Ala Arg Asn Arg Thr Leu
Asn Leu Ala Lys Leu Thr Gly Cys Ser Arg Glu Asn Glu Thr Glu
Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln Glu Ile Leu Leu
Asn Glu Ala Phe Val Val Pro Tyr Gly Thr Asn Leu Ser Val Asn
Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr Asp Met Pro Asp
Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr Gln Ile Leu Val
Gly Val Asn Lys Asp Glu Gly Thr Ala Phe Leu Ala Tyr Gly Ala
Pro Gly Phe Ser Lys Asp Asn Asn Ser Ile Ile Thr Arg Lys Glu
Phe Gln Glu Gly Leu Lys Ile Phe Phe Pro Gly Val Ser Glu Phe
Gly Lys Glu Ser Ile Leu Phe His Tyr Thr Asp Trp Val Asp Asp
Gln Arg Pro Glu Asn Tyr Arg Glu Ala Leu Gly Asp Val Val Gly
Asp Tyr Asn Phe Ile Cys Pro Ala Leu Glu Phe Thr Lys Lys Phe
Ser Glu Trp Gly Asn Asn Ala Phe Phe Tyr Tyr Phe Glu His Arg
Ser Ser Lys Leu Pro Trp Pro Glu Trp Met Gly Val Met His Gly
Tyr Glu Ile Glu Phe Val Phe Gly Leu Pro Leu Glu Arg Arg Asp
Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser Arg Ser Ile Val Lys
Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro Asn Glu Thr Gln
Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser Thr Glu Gln Lys
Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg Ile Met Thr Lys Leu
Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser Phe Phe Pro Lys Val

SEQ ID NO:203

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SEQ ID NO:204 SEQ ID NO:201

Glu Asp Asp Ile Ile Ile Ala Thr Lys Asn Gly Lys Val Arg Gly
Met Asn Leu Thr Val Phe Gly Gly Thr Val Thr Ala Phe Leu Gly
Ile Pro Tyr Ala Gln Pro Pro Leu Gly Arg Leu Arg Phe Lys Lys
Pro Gln Ser Leu Thr Lys Trp Ser Asp Ile Trp Asn Ala Thr Lys
Tyr Ala Asn Ser Cys Cys Gln Asn Ile Asp Gln Ser Phe Pro Gly
Phe Phe Gly Ser Glu Met Trp Asn Pro Asn Thr Asp Leu Ser Glu
Asp Cys Leu Tyr Leu Asn Val Trp Ile Pro Ala Pro Lys Pro Lys
Asn Ala Thr Val Leu Ile Trp Ile Tyr Gly Gly Phe Gln Thr
Gly Thr Ser Ser Leu His Val Tyr Asp Gly Lys Phe Leu Ala Arg
Val Glu Arg Val Ile Val Val Ser Met Asn Tyr Arg Val Gly Ala
Leu Gly Phe Leu Ala Leu Pro Gly Asn Pro Glu Ala Pro Gly Asn
Met Gly Leu Phe Asp Gln Gln Leu Ala Leu Gln Trp Val Gln Lys
Asn Ile Ala Ala Phe Gly Gly Asn Pro Lys Ser Val Thr Leu Phe
Gly Glu Ser Ala Gly Ala Ala Ser Val Ser Leu His Leu Leu Ser
Pro Gly Ser His Ser Leu Phe Thr Arg Ala Ile Leu Gln Ser Gly
Ser Xaa Asn Ala Pro Trp Ala Val Thr Ser Leu Tyr Glu Ala Arg
Asn Arg Thr Leu Asn Leu Ala Lys Leu Thr Gly Cys Ser Arg Glu

Asn Glu Thr Glu Ile Ile Lys Cys Leu Arg Asn Lys Asp Pro Gln
Glu Ile Leu Leu Asn Glu Ala Phe Val Val Pro Tyr Gly Thr Asn
Leu Ser Val Asn Phe Gly Pro Thr Val Asp Gly Asp Phe Leu Thr
Asp Met Pro Asp Ile Leu Leu Glu Leu Gly Gln Phe Lys Lys Thr
Gln Ile Leu Val Gly Val Asn Lys Asp Glu Gly Thr Ala Phe Leu
Ala Tyr Gly Ala Pro Gly Phe Ser Lys Asp Asn Asn Ser Ile Ile
Thr Arg Lys Glu Phe Gln Glu Gly Leu Lys Ile Phe Phe Pro Gly
Val Ser Glu Phe Gly Lys Glu Ser Ile Leu Phe His Tyr Thr Asp
Trp Val Asp Asp Gln Arg Pro Glu Asn Tyr Arg Glu Ala Leu Gly
Asp Val Val Gly Asp Tyr Asn Phe Ile Cys Pro Ala Leu Glu Phe
Thr Lys Lys Phe Ser Glu Trp Gly Asn Asn Ala Phe Phe Tyr Tyr
Phe Glu His Arg Ser Ser Lys Leu Pro Trp Pro Glu Trp Met Gly
Val Met His Gly Tyr Glu Ile Glu Phe Val Phe Gly Leu Pro Leu
Glu Arg Arg Asp Asn Tyr Thr Lys Ala Glu Glu Ile Leu Ser Arg
Ser Ile Val Lys Arg Trp Ala Asn Phe Ala Lys Tyr Gly Asn Pro
Asn Glu Thr Gln Asn Asn Ser Thr Ser Trp Pro Val Phe Lys Ser
Thr Glu Gln Lys Tyr Leu Thr Leu Asn Thr Glu Ser Thr Arg Ile
Met Thr Lys Leu Arg Ala Gln Gln Cys Arg Phe Trp Thr Ser Phe
Phe Pro Lys Val Leu